

Statement of Basis - Narrative

TV Permit

Company: Williams Four Corners, LLC
Facility: Thompson Compressor Station
Permit No(s): 0761M9 and P018R2M1
Tempo/IDEA ID No.: 1191 - PRT20110001
Permit Writer: Melinda Owens

Permit Review	Date to Enforcement: TBD	Inspector Reviewing:
	Date Enf. Review Completed: TBD	Date of Reply: (if necessary)
	Date to Applicant: TBD	Date of Reply: TBD
	Date of Comments from EPA: TBD	Date to EPA: TBD
	Date to Supervisor: TBD	

1.0 Plant Process Description:

The Thompson Compressor Station compresses pipeline quality natural gas using natural gas-fired, reciprocating compressor engines and turbines. The facility is permitted to operate one Solar Saturn 10-T1300 natural gas fired turbine (Unit 1), one Waukesha 9390GL natural gas fired reciprocating engine (Unit 2), one White Superior 8GT825 natural gas fired reciprocating engine (Unit 3), one Solar Saturn 10-T1200 natural gas fired turbine (Unit 9), one Solar Centaur 40-4700S natural gas fired turbine (Unit 14), and two condensate storage tanks (Units T3 & T12). The station is also equipped with miscellaneous liquid storage tanks and gas transmission equipment.

2.0 Description of this Modification:

This TV Significant Modification consists of the incorporation from NSR Permits 761M8, 761M8R1, and 761M9, including: the addition of one Solar Centaur 40-4700S turbine (Unit 14) and 2 catalytic heaters (exempt Units 15 & 16), updating of emissions for: particulates, equipment leaks (F1), truck loading (Unit F2), tank flashing & working/breathing emissions for Tanks 3 & 12 (into a single emissions cap). The operating parameters for existing engines (Units 2 & 3) and turbines (Units 1 & 9) are updated to match manufacturer's data.

SSM: In accordance with 20.2.7.15 NMAC, WFC is applying to permit emissions exceeding an emission limitation due to routine and predictable startup, shutdown, and maintenance (SSM). For this facility SSM emissions include venting natural gas from compressors (Units 1a-3a, 9a & 14a) and associated piping resulting in emissions of 187.9 pph and 12.4 tons per year of VOCs and small quantities of HAPs.

Malfunction: Applying for a maximum of 10 tpy of VOC emissions from periodic venting of natural gas caused by malfunctions as defined in 20.2.7.7.E NMAC. This request is in accordance with AQB's guidance Implementation Guidance for Permitting SSM Emissions and Excess Emissions dated January 1, 2011.

3.0 **Source Determination:**

1. The emission sources evaluated include Thompson Compressor Station.

2. Single Source Analysis:

A. SIC Code: Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? Yes

B. Common Ownership or Control: Are the facilities under common ownership or control? Yes

C. Contiguous or Adjacent: Are the facilities located on one or more contiguous or adjacent properties? Yes

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, or 20.2.74 NMAC applicability purposes? Yes

4.0 **PSD Applicability:**

Title V action does not determine PSD applicability; see the History Table for a summary of previous PSD applicability determinations.

5.0 **History (In descending chronological order, showing NSR and TV):** *The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
P018R2M1	TBD	TV Significant Modification	This Significant Modification incorporates the changes made in NSR Permits 761M8, 761M8R1, and 761M9. Please see Section 2 above.
0761M9*	10/16/11	NSR Significant Revision	This permit consists of increasing the emission rate for SSMs and the addition of Malfunction emissions.
0761M8R1	8/26/10	NSR Tech Rev	This Technical Revision, as requested by the facility, consists of a change in monitoring requirements for the SSM emission from the compressors and associated piping. The SSM emissions rate is based on facility blowdown volumetric flowrate, rather than annual number of events per compressor and facility.
0761M8	5/24/10	NSR Significant /PSD Minor Modification	This action includes: the addition of one Solar Centaur 40-4700S turbine (Unit 14) and 2 catalytic heaters (exempt Units 15 & 16). There is updating of emissions for: particulates, equipment leaks (F1), truck loading (Unit F2), tank flashing & working/breathing emissions for Tanks 3 & 12 (into a single emissions cap). Additionally, the operating parameters for existing engines (Units 2 & 3) and turbines (Units 1 & 9) are updated to match manufacturer's data.
P018R2*	2/15/10	Title V Renewal	Update the Title V permit with the NSR changes of 0761M7R2.
0761M7R2	2/23/09	Administrative Revision	Corrected serial numbers for compressor engines units 1-3 and 9 to S428435, 76240, X00130, S401519, respectively
P018R1M3	2/21/08	Title V Modification	Replaced Unit 4, a Solar Turbine T1001, with Unit 9, a Solar Turbine T1200.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
0761M7R1	9/15/06	Admin Rev	Changed the company name from Williams Field Services to Williams Four Corners, LLC on August 23, 2006.
P018R1M2	9/15/06	Administrative Revision	Changed the company name from Williams Field Services to Williams Four Corners, LLC on August 23, 2006.
P018R1M1	6/2/06	Title V Modification	Changed Responsible Official to Don Wicburg, Director, Four Corners Area.
0761M7	02/21/06	Significant Revision	Replaced the existing Solar Saturn T1001 (891 hp) with a Solar Saturn 10-T1200 (997 hp) because Unit 4 is due for an overhaul and no longer supported by the manufacturer.
0761M6	2/7/05	PSD Minor Modification	<p>Updated permitted emissions from the condensate storage tank (Unit T-3) with potential flash emissions. The November 2001 construction permit application and the December 2002 Title V operating permit application identified two storage tanks (Units T-3 and T-4) as having the potential for flash emissions. Unit T-4 is no longer permitted to store condensate with the potential for flash emissions. All condensate with the potential for flash emissions will initially be stored in Unit T-3. If extra storage capacity is required (for example, if weather delays access by haul trucks), flashed condensate will be transferred from Unit T-3 to Unit T-12 until the condensate can be transported off-site.</p> <p>WFS also requests that the option to operate the Caterpillar G3516TALE reciprocating engine (Unit 5) be removed from the permit. A Waukesha 9390GL (Unit 2) has been installed and WFS has no plans to reinstall the G3S 16TALE.</p>
0761M6R1	12/3/04	Administrative Revision	Updated all of Williams' serial numbers.
P018R1	08/10/04	Title V Renewal	Title V permit renewal and incorporated 761-M3, M4, M4R1, M5, and M5R1.
0761M5R2	7/23/04	Administrative Revision	Rescinded M5 and made M4 the most current permit.
0761M5R1	5/26/04	Administrative Revision	Like kind replacement of one Waukesha 9390GL. New serial # is 363885.
0761M5	6/21/02	Significant Revision	Added a 100 mscfd dehydrator; Added a flare to control existing condensate tank flash emissions and overhead still vent emissions from the proposed 100 mmscfd dehydrator; and Either retrofit the existing White Superior 8GTS2S engine with Clean Bum combustion technology or replace the unit with a Waukesha 5794LT engine to increase horsepower and reduce emissions.
0761M4R1	11/1/01	Administrative Revision	Like kind replacement of natural gas-fired turbine.
0761M4	6/16/00	Minor Modification	This modification consists of increasing the emission limits for the White Superior 8GT825 reciprocating engine (Unit 3) and the Solar Saturn 1100 turbine (Unit 4).
0761M3	12/1/98	Minor Modification	Replaced Clark RA-4 compressor engine with either a Waukesha 9390 GL or a Solar Saturn 10-T1300.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
P018	10/13/98	New Title V	Initial TV permit to incorporate NSR permit 0761 through 0761-M2.
0761M2	9/10/96	Modification	Replaced the White Superior 8G825 IC engine with a Solar Saturn 10-T1300.
0761M1	11/3/92	Modification	Updated emission limits to reflect values of recent performance testing.
0761	6/19/91	Construction Permit	Permitted 1 Superior 8G825 IC, 1 Clark RA4 IC, 1 Superior 825 HP IC, and 1 Solar Saturn 887 hp turbine.

6.0 **Public Response/Concerns:**

On August 22, 2011, WildEarth Guardians (WEG) and San Juan Citizens Alliance (SJCA) submitted written comments specifically regarding the application to permit startup, shutdown, maintenance, and malfunction emissions. Submittal of written comments was before the end of the 30-day comment period. They have also requested to review the draft permits before issuance.

To date, this permit writer is not aware of any other public comments or concerns with this permit application.

The Department's analysis was made available 12/19/2011.

WEG & SJCA were provided a copy of the analysis on: 12/19/2011. Thirty days will be provided for review in accordance with 20.2.70.401.

WEG & SJCA were provided a copy of the draft permit on: 12/19/2011.

7.0 **Compliance Testing:**

Unit No.	Compliance Test	Test Dates
1	Tested in accordance with EPA test methods for NOx and CO as required by permit.	01/30/97
2	Tested in accordance with EPA test methods for NOx and CO as required by permit.	01/25/00
3	Tested in accordance with EPA test methods for NOx and CO as required by permit.	07/01/99
9	Tested in accordance with EPA test methods for NOx and CO as required by permit.	05/13/08
14	NA**	NA

** Initial compliance test is not imposed on Unit 14 because it must comply with the requirements of NSPS Subpart KKKK

8.0 **Startup and Shutdown:**

- A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? Yes
- B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? Yes
- C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan

was developed and implemented in accordance with 20.2.7.14.A and B NMAC? Yes
D. Were emissions from startup, shutdown, and scheduled maintenance operations calculated and included in the emission tables? Yes

9.0 **Compliance and Enforcement Status:** In her August 19, 2011 e-mail Renae Held stated that a “Field Citation (WIL-1191-1001-FC) was issued for the Failure to submit a Subpart KKKK compliance test report in a timely manner on 8/19/11.”

10.0 **Modeling:** The emissions subject to this permit revision are VOCs and HAPS which are not subject to air dispersion modeling.

VOC is a precursor to the criteria pollutant, ozone. The AQB tracks compliance with the ozone National Ambient Air Quality Standards through monitoring and does not require pre-construction single source ozone modeling. Ozone modeling is too cost prohibitive to attach to a typical permit application. However, applications for PSD major new or modifications may require ozone modeling if the facility-wide VOC emissions are 100 tpy or more. These applicants are required to contact AQB and EPA to determine if ozone modeling is required.

Regional ozone modeling for the Four Corners area was done in 2009 (see <http://www.nmenv.state.nm.us/aqb/4C/Modeling.html>) and the Air Quality Bureau is continuing to analyze ozone in the region.

Previous modeling was performed for NSR 0761M7. In his 12/30/2005 report, David Heath stated that the modeling analysis demonstrated that normal operation of the facility neither causes nor significantly contributes to any exceedances of applicable air quality standards. The standards relevant at this facility are NMAAQs for NO₂ and CO, and NAAQS for NO₂ PSD increment in Class I and Class II areas.

11.0 **State Regulatory Analysis(NMAC/AQCR):**

The permit writer verified the state and federal regulatory applicability determinations that applied to the units and the activity of venting from SSM and Malfunction emissions in permit application number P018R2M1.

According to the applicant’s applicability determination and verification by the department, the venting of natural gas due to SSM or malfunction and any units from which this venting would occur are not currently subject to any NSPS or NESHAP. Regardless, the permitting of SSM and/or malfunction emissions do not supersede any other federal or state regulation. The most stringent requirement applies.

20 NMAC	Title	Applies (Y/N)	Comments
2.3	Ambient Air Quality Standards	N	20.2.3.9 NMAC, LIMITATION OF APPLICABILITY TO 20.2.70 NMAC. The requirements of this part are not applicable requirements under 20.2.70 NMAC, as defined by that part. This section does not limit the applicability of this part to sources required to obtain a permit under 20.2.72 NMAC, nor does it limit which terms and conditions of permits issued pursuant to 20.2.72 NMAC are applicable requirements for permits issued pursuant to 20.2.70 NMAC.
2.7	Excess Emissions	Y	Applies to all facilities' sources
2.61	Smoke and Visible Emissions	Y	Engines (units 2 and 3) and turbines (units 1, 9, and 14) are Stationary Combustion Equipment.
2.70	Operating Permits	Y	Source is major for NOx, CO, VOCs, as defined at 20.2.70.200 NMAC. PTE is > 100 TPY for each.
2.71	Operating Permit Fees	Y	Source is subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC.
2.72	Construction Permits	Y	NSR Permits are the applicable requirement, including 20.2.72 NMAC.
2.73	NOI & Emissions Inventory Requirements	Y	Applicable to all facilities that require a permit. PER > 10 tpy for NOx, CO and VOC.
2.74	Permits-Prevention of Significant Deterioration	Y	Source is not one of the 28 listed – PTE > 250 tpy 328.8 tpy of NOx
2.75	Construction Permit Fees	Y	This facility is subject to 20.2.72 NMAC.71 NMAC.
2.77	New Source Performance	Y	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60, as amended through January 31, 2009. 40 CFR 60 Subparts GG and KKKK apply.
2.78	Emissions Standards for HAPs	N	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 61.
2.79	Permits Nonattainment Areas	N	This facility is not located in a non-attainment area.
2.82	MACT Standards for Source Categories of HAPs	N	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR 63.

12.0 Federal Regulatory Analysis:

Air Programs Subchapter C (40 CFR 50)	National Primary and Secondary Ambient Air Quality Standards	Applies (Y/N)	Comments
C	Federal Ambient Air Quality Standards	Y	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.

NSPS Subpart (40 CFR 60)	Title	Applies (Y/N)	Comments
A	General Provisions	Y	Applies if any other subpart applies. GG and KKKK apply
40 CFR60.40a, Subpart Da	Performance Standards for Electric Utility Steam Generating Units,	N	Not an electric utility steam generating unit.
40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	N	Tanks do not have a storage capacity greater than 151,416 liters (40,000 gallons) for petroleum liquids for which construction is commenced after May 18, 1978.
40 CFR 60.330 Subpart GG	Stationary Gas Turbines	Y	Units 1 has a heat input greater than the 10 MMBtu/hour threshold, and was installed in 1996 which is after the October 3, 1977 applicability date.
40 CFR 60, Subpart KKKK	Standards of Performance for Stationary Gas Turbines	Y	Both Units 9 & 14 have a heat input greater than the 10 MMBtu/hour threshold. Unit 9 was installed after the February 18, 2005 applicability date. Unit 14 has not yet been installed.
40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO2 Emissions	N	The facility is not a Onshore Natural Gas Processing facility with SO2 Emissions
40 CFR Part 60 Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	N	Engines at the facility were manufactured/ constructed prior to the trigger dates.

NESHAP Subpart (40 CFR 61)	Title	Applies (Y/N)	Comments
A	General Provisions	N	Applies if any other subpart applies; no subpart applies.

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
A	General Provisions	N	Applies if any other subpart applies and none apply.
40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	N	Does not have any of the affected sources.
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal	N	Facility is an area source of HAPS. Existing Unit 2 (4SLB, 1864 hp) and Unit 3 (4SRB, 958 hp) do not have to meet the requirements of this subpart

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
	Combustion Engines (RICE MACT)		and of subpart A per 63.6590(b)(3).

Miscellaneous	Title	Applies (Y/N)	Comments
40 CFR 64	Compliance Assurance Monitoring	N	The facility does not have control equipment.
40 CFR 68	Chemical Accident Prevention	N	Does not store any identified substances.
40 CFR 70	Title V- State Operating Permit Programs	N	Operating Permit Program – is not applicable – New Mexico State has full delegated authority and Title V is administered under 20.2.70 NMAC.

13.0 **Exempt and/or Insignificant Equipment that do not require monitoring:**

Title V - INSIGNIFICANT ACTIVITIES (Dated March 24, 2005) as defined by 20.2.70.7.P NMAC:
Insignificant List Link

INSIGNIFICANT ACTIVITIES	JUSTIFICATION
Units 10 -13, Natural gas fired heaters	Item 1.a: Potential to emit < 1 ton per year
T-1 210 bbl glycol storage tank	Item 1.a & 5: Potential to emit < 1 ton per year, VP < 10 mm Hg
T-2 210 bbl methanol storage tank	Item 1.a: Potential to emit < 1 ton per year
T-4 70 bbl produced water storage tank	Item 1.a: Potential to emit < 1 ton per year
T-5 800 gal Ambitol storage tank	Item 1.a & 5: Potential to emit < 1 ton per year, VP < 10 mm Hg
T-6 100 gall produced water storage tank	Item 1.a & 5: Potential to emit < 1 ton per year, VP < 10 mm Hg
T-7 800 gal Lube Oil storage tank	Item 1.a & 5: Potential to emit < 1 ton per year, VP < 10 mm Hg
T-8a/8b Two 500 gal Lube Oil storage tanks	Item 1.a & 5: Potential to emit < 1 ton per year, VP < 10 mm Hg
T-9 50 bbl produced water storage tank	Item 1.a: Potential to emit < 1 ton per year
T-10 70 bbl produced water storage tank	Item 1.a: Potential to emit < 1 ton per year
T-11 100 bbl produced water storage tank	Item 1.a: Potential to emit < 1 ton per year
T-15 50 bbl storage tank	Item 1.a: Potential to emit < 1 ton per year
T-16 45 bbl storage tank	Item 1.a: Potential to emit < 1 ton per year
T-17 4000 gal deionized water storage tank	Item 1.a: Potential to emit < 1 ton per year
T-18 300 gal soap storage tank	Item 5: Tank capacity < 500 gallons
T-19 125 gal solvent storage tank	Item 5: Tank capacity < 500 gallons

14.0 **New/Modified/Unique Conditions** (Format: Condition#: Explanation):

- A. Change in Permit Conditions A.107.A, A107.B, & A.107.C.
- B. New turbine (Unit 14) has been added to Conditions A205.A & C.
- C. VOC emission rates in Table A106.A changes for Units 1, 9, and T-3/T-12.
- D. Emissions added in Table A106.A for new Unit 14.
- E. Specific conditions for SSM and Malfunction in Condition A107 (please see discussion below).

Specific Condition A107.C SSM VOC Emission Limits – Condition limits emissions from routine and predictable emissions due to startup, shutdown, and/or maintenance (SSM). SSM emission are due to venting of field gas. Permittee demonstrates compliance with limits by applying the mol % VOC content from the most recent gas analysis to the amount of field gas vented.

Specific Condition A107.D Malfunction Emission Limits – Malfunction emissions are also from venting field gas. Since they are not predictable, the permittee must identify the source of the malfunction emissions so that enforcement and compliance can determine if any state or federal regulations were violated during the malfunction event. The permittee tracks malfunction emissions in the same manner as for SSM emissions.

General Condition B107 Reiterates the requirement that SSM emissions be minimized regardless if the SSM emission limit has been met or not (20.2.72.14.A NMAC).

General Condition B109.E Emphasizes that although malfunction emission limits may be established, permittees must still minimize emissions during startup, shutdown, and malfunction. This requirement applies regardless if the malfunction limit has been met or not.

MONITORING SPECIFICATIONS:

Emission unit Nos.	Parameters To Monitor	To Comply With	Monitoring Required	Monitoring Conditions
Monitoring for Facility-wide Emissions				
1, 9, & 14	Fuel Sulfur Content	40 CFR 60, Subparts A, GG, & KKKK	Specific requirements of 40 CFR 60, Subpart GG	A110
1, 2, 3, 9	Visible emissions	20.2.61 NMAC	Opacity	A111
Monitoring for IC Engines				
2,3	NO _x , CO	Emission Limits specified in Table 3.2	Portable analyzer testing (annual)	A201.A
2,3	NO _x , CO	Emission Limits specified in Table 3.2	Maintenance & Repair	A201.B
Monitoring for Tanks				
T-3, T-12	Tank throughput and separator pressure	Emission Limits specified at section 3.2	Operations Monitoring	A203A
Monitoring for Turbines				
1, 9	NO _x , CO	Emission Limits specified in Table 3.2	Portable analyzer testing (annual)	A205.A
1	NO _x , SO ₂	40 CFR 60 Subpart GG and general provisions in Subpart A	Specific requirements of 40 CFR 60.330, Subpart GG and general provisions of Subpart A	A205.B
9	NO _x , SO ₂	40 CFR 60 Subpart KKKK and general provisions in Subpart A	Specific requirements of 40 CFR 60 Subpart KKKK and general provisions in Subpart A	A205.C

Emission unit Nos.	Parameters To Monitor	To Comply With	Monitoring Required	Monitoring Conditions
1	Sulfur Content	40 CFR 60.330, Subpart GG and general provisions in Subpart A	Specific requirements of 40 CFR 60.330, Subpart GG and general provisions of Subpart A	A205.D
9	Sulfur Content	40 CFR 60 Subpart KKKK and general provisions in Subpart A	Specific requirements of 40 CFR 60 Subpart KKKK and general provisions in Subpart A	A205.E

Date of [Monitoring Protocol](#) used for Turbines – 9/23/10

Date of [Monitoring Protocol](#) used for I C Engines – 11/4/11

Date of [Monitoring Protocol](#) used for Tanks – 9/30/11

15.0 For Title V action: Cross Reference Table between NSR Permit 0761M8R1 and TV Permit P018R2M1. NSR permit conditions cross referenced to the TV permit are federally enforceable conditions, and therefore brought forward into the TV permit:

Note: SNR Permit 0761M9 was not used in the cross-reference because it was the abbreviated SSM & Malfunction permit format.

NSR Changed by TV*	NSR Condition #	TV Section #
	A103 Applicable requirements	A103 Applicable requirements
	A104 Regulated equipment	A104 Regulated equipment
	A106.A Allowable emissions	A106.A Allowable emissions
	A106.B NO _x emissions (NSPS Subpart GG)	A106.B NO _x emissions (NSPS Subpart GG)
	A106.C SO ₂ emissions (NSPS Subpart GG)	A106.C SO ₂ emissions (NSPS Subpart GG)
	A106.B NO _x emissions (NSPS Subpart KKKK)	A106.D NO _x emissions (NSPS Subpart KKKK)
	A106.C SO ₂ emissions (NSPS Subpart KKKK)	A106.E SO ₂ emissions (NSPS Subpart KKKK)
XXX	A107 SSM	A107 SSM & Malfunction
	A110 Fuel Sulfur Content	A110 Fuel Sulfur Content
	A111 Opacity	A111 Opacity
	A201.A Portable analyzer testing for engines	A201.A Portable analyzer testing for engines
XXX		A201.B Maintenance & Repair
	A203.A Tank throughput and separator pressure	A203.A Tank throughput and separator pressure
	A205.A Portable analyzer testing for turbines	A205.A Portable analyzer testing for turbines
	A205.B Subpart GG	A205.B Subpart GG
	A205.C Subpart KKKK	A205.C Subpart KKKK

Notes: * TV staff will indicate by entering a “X” if the original NSR permit condition was modified or replaced for the purpose of clarification, typographical correction or due to increased stringency.

16.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions.

- A. A201.B Maintenance and Repair – reflects new engine monitoring protocols
- B. A107, all sections – reflects new SSM & Malfunction permit language (see below)

Emission Estimate Verification:

The permit writer verified the calculations and assumptions used in emission estimates.

SSM emissions are due to venting of predictable quantities of field gas from turbines, compressors, and associated piping during routine and predictable startup or shutdown.

Turbine/compressor Units 1a, 9a, and 14a are calculated to emit SSM gas loss of 11,215 scf per event. With 105 startups and shutdowns per year, the VOC emission rate is 8.9 tons per year. Engine/compressor Unit 2a is calculated to emit SSM gas loss of 3,610 scf per event. With 384 startups and shutdowns per year, the VOC emission rate is 3.5 tons per year.

A 0.3 mol % VOC content was applied to the cubic feet of gas vented to determine VOC emissions. The percent VOCs was determined from a 6/2/11 extended gas analysis. HAPs were determined using the same method. No hydrogen sulfide was detected in the gas.

Malfunction emissions due to venting of field gas apply to all operations at the facility except combustion and dehydrator still vent emissions.

Applicant requested 10 tpy VOC malfunction emissions, which is the allowable limit according to department guidance and does not exceed any permitting threshold.

There are no NESHAP applicable to these activities and so no HAP limits apply.